

**OPPENHEIMER**

OPPENHEIMER WOLFF &amp; DONNELLY LLP

Plaza VII, Suite 3300  
45 South Seventh Street  
Minneapolis, MN 55402-1609

oppenheimer.com

612.607.7000  
Fax 612.607.7100**RECEIVED**  
**CENTRAL FAX CENTER**


APR 06 2007

**FAX COVER LETTER**

April 6, 2007

**COMPANY:** Commissioner for Patents – Art Unit 3623  
**PHONE:**  
**FAX:** 571-273-8300**FROM:** Christopher R. Hilberg  
**DIRECT DIAL:** 612.607.7237  
**EMAIL:** CHilberg@Oppenheimer.com  
**RE:** Application No.: 10/045,522  
Our File No.: 20032-3007**CERTIFICATE OF FACSIMILE TRANSMISSION**

I hereby certify that a Request for Corrected Filing Receipt, Red-lined Filing Receipt and Amendment After Allowance are being facsimile transmitted to the Commissioner for Patents on the date listed below.

  
Debra J. Bruck  
Date

This facsimile contains confidential information intended only for the use of the addressee(s) named above and may contain information that is legally privileged. If you are not the addressee, or the person responsible for delivering it to the addressee, you are hereby notified that reading, disseminating, distributing or copying this facsimile is strictly prohibited. If you have received this facsimile by mistake, please immediately notify us by telephone and return the original message to us at the address above via the Postal Service (we will reimburse postage). Thank you.

Originals: Not being sent

Completed by: Debra J. Bruck/7375

You should receive 8 page(s) including this page.  
If the transmission is incomplete, please call 612.607.7276 as soon as possible.

APR 06 2007

PATENT

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Benjamin Glover Thengvall

Serial No.: 10/045,522

Filed: January 11, 2002

Title: RAPID GENERATION OF  
MINIMUM LENGTH PILOT  
TRAINING SCHEDULES

Group Art Unit: 3623

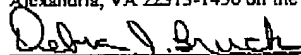
Examiner: Jeanty Romain

Docket No.: 20032-3007

Office of Initial Patent Examination's  
Customer Service Center  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

## Certificate of Mailing/Transmittal

I hereby certify that this correspondence is being facsimile transmitted to the USPTO (Fax. No. 571.273.8300) or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Office of Initial Patent Examination, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.

  
Debra J. Bruck4-4-07  
Date**REQUEST FOR CORRECTED FILING RECEIPT**

Dear Sir:

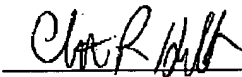
Please amend the title for the above-identified application to read: RAPID GENERATION OF MINIMUM LENGTH PILOT TRAINING SCHEDULES.

Please correct the title and send us a corrected filing receipt. Attached for your reference, is a copy of a red-lined Filing Receipt showing the amended patent application title, and a copy of the Amendment After Allowance.

The Commissioner is authorized to charge any fees associated with this filing to Deposit Account No. 50-1901 (Reference No. 20032-3007).

Respectfully submitted,

By:



Christopher R. Hilberg, Reg. No. 48,740  
Customer No. 29838  
Oppenheimer, Wolff & Donnelly  
45 South Seventh Street, Suite 3300  
Minneapolis, MN 55402  
Telephone: 612-607-7237  
Facsimile: 612-607-7100  
Email: CHilberg@Oppenheimer.com



## UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS  
UNITED STATES PATENT AND TRADEMARK OFFICE  
WASHINGTON, D.C. 20231  
www.uspto.gov

APPLICATION NUMBER	FILING DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	DRAWINGS	TOT CLAIMS	IND CLAIMS
10/045,522	01/11/2002	2151	370	02005/08PAUS	9	14	3

CONFIRMATION NO. 9974

Gerald E. Lester  
22107 Fielder Dr.  
Austin, TX 77450

## UPDATED FILING RECEIPT



\*OC00000007992148\*

Date Mailed: 05/01/2002

Receipt is acknowledged of this nonprovisional Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Filing Receipt Corrections, facsimile number 703-746-9195. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

**RECEIVED**

MAY 13 2002

## Applicant(s)

Benjamin Glover Thengvall, Austin, TX;  
Xiangtong Qi, Richardson, TX;

## Domestic Priority data as claimed by applicant

## Foreign Applications

If Required, Foreign Filing License Granted 02/12/2002

Projected Publication Date: 07/17/2003

Non-Publication Request: No

Early Publication Request: No

\*\* SMALL ENTITY \*\*

## Title

System and method for rapid generation of minimum length pilot training schedules

## Preliminary Class

709

DOCKETED

BY W DATE 5/10/02  
FOR ACTION ON FOLLOWING DATES:

\_\_\_\_\_  
\_\_\_\_\_  
11/1/03

---

**LICENSE FOR FOREIGN FILING UNDER  
Title 35, United States Code, Section 184  
Title 37, Code of Federal Regulations, 5.11 & 5.15**

**GRANTED**

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Office of Export Administration, Department of Commerce (15 CFR 370.10 (j)); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

**NOT GRANTED**

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

**RECEIVED  
CENTRAL FAX CENTER**

APR 06 2007

Serial No. 10/045,522  
Amendment After Allowance  
Page 1 of 4

P A T E N T

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Benjamin Glover Thengvall

Serial No: 10/045,522

Filed: January 11, 2002

Title: RAPID GENERATION OF MINIMUM  
LENGTH PILOT TRAINING  
SCHEDULES

Group Art Unit: 3623

Examiner: Romain Jeanty

Docket No: 20032-3007

Mail Stop Issue Fee  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Certificate of Mailing/Transmittal  
I hereby certify that this correspondence is being facsimile transmitted to the  
USPTO (Fax. No. 571-273-2885) or deposited with the United States Postal  
Service with sufficient postage as first class mail in an envelope addressed  
to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450  
on the date shown below.

*Debra J. Bruck*  
Debra J. Bruck3-21-07  
DateAMENDMENT AFTER ALLOWANCE

Dear Sirs:

Applicant kindly requests that the following amendments be entered in order that the  
Summary of the Invention and Abstract better describe the invention based on the allowed  
claims.

Serial No. 10/045,522  
Amendment After Allowance  
Page 2 of 4

### Amendments to the Specification

Please replace the "Title" with the following rewritten "Title":

**~~SYSTEM AND METHOD FOR RAPID GENERATION OF MINIMUM LENGTH~~**  
**PILOT TRAINING SCHEDULES**

Please replace lines 20-24 of page 4 of the "Summary of the Invention" with the following paragraph. This amendment will allow the Summary to reflect the allowed claims.

~~A method and system~~The present disclosure provides for rapidly generating minimum length pilot training schedules ~~is disclosed~~, wherein unique branch and bound trees are generated for use progressively to schedule training class subsets, and said schedule training class subsets are operated upon by a mixed integer programming model to provide an hourly schedule of resources and events for each student.

Serial No. 10/045,522  
Amendment After Allowance  
Page 3 of 4

**Amendments to the Abstract**

Please replace the Abstract as follows so that the Abstract reflects the allowed claims:

The present disclosure provides for a[[A]] system for rapidly generating minimum length pilot training schedules which uses a branch and bound, and a mixed integer programming model with constraints to produce student and resource schedules at a device period level for all pilots of an airline.


Serial No. 10/045,522  
Amendment After Allowance  
Page 4 of 4

**REMARKS**

Applicant respectfully submits the above amendments to the specification allow the Summary of the Invention and the Abstract to match the amended claims.

The Commissioner is hereby authorized to charge any additional fees or credit any overpayment to Deposit Account No. 50-1901 (Reference No. 20032-3007).

Respectfully submitted,

By   
Christopher R. Hilberg, Reg. No. 48,740  
Customer No. 29,838  
Oppenheimer Wolff & Donnelly LLP  
45 South Seventh Street, Suite 3300  
Minneapolis, Minnesota 55402  
Telephone: 612.607.7237  
Facsimile: 612.607.7100